

Remarks

Upon entry of this amendment claims 200-207 and 229-235 are pending. Amended and new claims are provided to more fully describe the invention and to expedite prosecution. Claims 1-199 and 208-217 are canceled, without prejudice or disclaimer; claims 228-235 are added by this amendment.

Support for the amendments and new claims may be found at least at page 9, line 21 et seq., page 17, line 23 et seq., page 57, line 31 et seq., and Examples 7-15, 21, and 25-28. No new material has been added.

Response to 4-02-2007 Miscellaneous Office Action

The Office has argued that the new claims fall outside the scope of the original elected invention, filed in response to a Restriction Requirement. Applicant respectfully disagrees. The original elected invention was elected in April of 2002. It was with traverse and to Group I, claims 1-63 drawn to a biomaterial. Claim 1, which was elected with traverse was (as currently in PAIR):

1. A biomaterial modified with at least one non-proteinaceous catalyst for the dismutation of superoxide or a precursor ligand of a non-proteinaceous catalyst for the dismutation of superoxide.

As can be seen, the claim is to a biomaterial "with" a non-proteinaceous catalyst. The current claims at issue are significantly narrower, and thus a more limited search should be required. For example, the current broadest claim is:

A modified biomaterial useful for the dismutation of superoxide comprising a biomaterial substantially compatible with a biological system and at least one non-proteinaceous catalyst for the dismutation of superoxide covalently bound to the surface of the biomaterial, wherein the non-proteinaceous catalyst for the dismutation of superoxide comprises a pentaazamacrocyclic.

The current broadest claim is narrower than the originally elected invention, and thus falls within the original restriction requirement in every respect. A "biomaterial" of the original claim is now a "modified biomaterial", the term "with" has been precisely defined as "covalently attached to the surface". In addition the non-proteinaceous catalyst of the original claim has

been defined as comprising a pentaazamacrocyclic. Further Applicant has offered species of many of these groups in the claims depending therefrom. Far from being harder to search, the precision claiming of species within the more broadly defined genus makes the search easier for the Office. Applicant respectfully requests reconsideration of the argument in the Miscellaneous Action and allowance of all claims.

Status of the claims

The Examiner has withdrawn from examination claims 52, 55-57 and 212-227, which therefore have been canceled by this amendment. Claims 200 and 204 (and accordingly, all remaining claims, which depend therefrom) have been amended to clarify that the claims as presently pending are focused on non-proteinaceous pentaazamacrocyclic molecules which act as catalysts for the dismutation of superoxides covalently bound to the surface of a biomaterial.

As discussed below, applicants were the first to show that this special class of molecules would retain their ability to effectively dismutate (break apart) superoxides catalytically over prolonged periods despite being covalently bound to the surface of wide ranging biomaterials, improving the biomaterials' resistance to degradation and reducing the inflammatory response to the insertion of such biomaterials into the body. See, e.g., page 9, et seq., and various Examples. Accordingly, the claimed invention is neither anticipated nor obvious, and applicants therefore urge prompt allowance.

Rejections under 35 U.S.C. 102(e)

The Examiner has rejected the claims under 35 U.S.C. 102(e) as being anticipated by Riley et al. (U.S. Patent No. 6,084,093 (" '093")). The '093 reference does not support this rejection. While it discloses pentaazamacrocyclics, the reference does not disclose the binding of the pentaazamacrocyclic compounds to the surface of the biomaterial (e.g. claim 200, 204 and claims depending therefrom). This requirement for binding has been emphasized by adding "covalently" to the claims (e.g. claim 200, 204 and claims depending therefrom).

Rejections under 35 U.S.C. 103

The claims were further rejected over the combination of Riley et al. and Green et al. (U.S. Patent 6,939,569). The Green et al. reference, however, discloses medical devices which can be *coated with an oxidant*. The pentaazamacrocyclic compounds have superoxide dismutase activity, i.e. they have anti-oxidant activity rather than oxidant activity (thus Green

teaches away from the use of an anti-oxidant) and in addition, the coatings of Green et al. are not covalently bound to the medical devices. Thus, the combination of Riley et al. and Green et al. do not render the claims obvious.

Conclusion

For the foregoing reasons, Applicants respectfully request reconsideration and withdrawal of rejections of the claims. It is believed that the claims as currently presented are in a condition for allowance and such favorable action is respectfully requested. If any questions arise or if any issues remain to be resolved, it is requested that the Examiner contact the undersigned attorney. Applicants believe there is no other fee due at this time. However, the Commissioner is hereby authorized to deduct any deficiency or credit any overpayment to Deposit Account No. 19-3140.

Respectfully submitted,

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